Toilet lid

Background of the Invention

The present invention relates to a toilet lid according to the preamble of Claim 1.

Toilets are known in which the toilet lid is adapted for the reception of decorative materials. Such toilet lids are double-walled and include a hollow space for the reception of decorative materials, and their outer wall consists of a glass-clear material. In the aforedescribed embodiment, the toilet lids have to be manufactured and acquired separately. The toilet lids of existing toilets which have already been installed cannot be retrofitted. In another embodiment, decorative films, e.g. with a floral pattern, are stuck onto the outer wall surface of the toilet lid and covered with a protective film, or incorporated into the toilet lid's material such that the image is visible from outside.

The object of the present invention is to retrofit a usual, commercially available toilet lid with or without a drilled through-hole, or the toilet lid of a toilet of the type described at the beginning which has already been installed without damaging the toilet lid and in such a way that the toilet lid can receive solid, liquid or movable decorative objects or materials and/or functional objects which are attractively arranged and able to be seen by the toilet user.

Summary of the Invention

The aforesaid object is achieved by means of a toilet lid having the features specified in Claims 1 and 2.

According to a first embodiment specified in Claim 1, the invention consists in that at least one cupola- or dome-like, one- or multidimensional moulded body made of a glass-clear, transparent or semitransparent material is fixedly or detachably arranged on the outer wall surface of the toilet lid, and solid, liquid or movable decorative objects or materials and/or functional objects are arranged in the hollow space defined by the moulded body and the outer wall surface of the toilet lid.

The aforedescribed embodiment according to the invention enables usual, commercially available or existing toilet lids to be provided with a cupola-like moulded body made of a glass-clear plastic thus defining a space enclosed by the moulded body and the outer wall surface of the toilet lid, in which space decorative materials or objects can be arranged which can be solid, e.g. images of landscapes or cities, movable, e.g. dice, marble games, or liquid, e.g. a coloured liquid with wooden or plastic fish swimming therein in order to achieve an aquarium-like effect.

According to a second embodiment specified in Claim 2, the invention consists in that both openings of the drilled through-hole in the toilet lid are covered by means of plate-shaped or cupola- or dome-like, one- or multidimensional moulded bodies made of a glass-clear, transparent or semitransparent material and/or a non-transparent material, which moulded bodies are fixedly or detachably arranged, and solid, liquid or movable decorative objects or materials and/or functional objects are arranged in the hollow or interior space defined by the moulded bodies.

It is particularly advantageous that the openings of the drilled through-hole in the toilet lid be covered by means of a cupola- or dome-like body since in this way a large hollow space is obtained in which functional objects, e.g. a radio or a game, can be placed.

Further advantageous embodiments of the invention are described in the subclaims.

For instance, the cupola-like moulded body arranged on the outer wall surface of the toilet lid can vary widely in shape. The area of the moulded body's base corresponds to the area of the outer wall surface or a part of the outer wall surface of the toilet lid. It is also possible to arrange more than one cupola-like moulded body on the toilet lid. The cupola-like moulded body can be box-shaped or have the form of a rounded cap.

According to another embodiment of the invention, the cupola-like moulded body is provided with a bottom plate instead of being open at its bottom side thus defining an enclosed interior space. The decorative materials or functional objects are placed in the interior space before the bottom plate is attached.

The cupola-like moulded body can be secured to the outer wall surface of the toilet lid e.g. by screwing, gluing or clamping or by means of other suitable fastening members. In this regard, it is particularly advantageous that the cupola-like moulded body comprises a circumferential supporting edge bent perpendicularly outwards, which supporting edge facilitates attachment to the outer wall surface of the toilet lid, e.g. by screwing or gluing.

The cupola-like moulded body can also be secured to the toilet lid by attaching the cupola-like moulded body to the outer wall surface of the toilet lid by means of a lath having an L-shaped cross-sectional profile, which lath is secured to the toilet lid and overlays the edge area of the moulded body with one of its legs. The moulded body's outwardly angled, circumferential edge is then retained in the gap between the outer wall surface of the toilet lid and the angled leg of the lath. The fixing lath can be

arranged and designed such that the outwardly angled edge of the moulded body is push-inserted into the gap.

In order that the interior space of the cupola-like moulded body be accessible and the decorative materials or functional objects can be exchanged at any time, another embodiment of the invention envisages that the cupola-like moulded body be pivotably mounted on the toilet lid by means of a hinge, which is preferably provided in the rear area of the toilet lid, and the front area of the moulded body be retained on the toilet lid by means of a Velcro fastener, magnetic lock, clamping or snap-on device.

In order to protect the materials or objects contained inside the moulded body from moisture and splashed water, the cupola-like moulded body is sealingly arranged on the outer wall surface of the toilet lid by means of a rubber seal arranged in the moulded body's edge area.

Functional objects arranged in the interior space of the cupola-like moulded body, e.g. a clock or a radio, can be operated from outside due to the fact that the cupola-like moulded body or a portion of the cupola-like moulded body consists of a plastic material having resilient properties and a high inherent stability.

Toilet lids having a drilled through-hole are also provided with cupola-like covers which close the openings of the through-hole such that large-volume hollow spaces are obtained. The cross-sectional area of the drilled through-hole in the toilet lid can be smaller than the area of the toilet lid, but the cross-sectional area of the drilled through-hole in the toilet lid can also be approximately the same as the area of the toilet lid. In the latter case, the drilled through-hole in the toilet lid can have a cross-sectional shape corresponding to the shape of the outer wall surface of the toilet lid.

The drilled through-hole in the toilet lid can be sized such that only a circumferential rim of the toilet lid remains to the outer wall surfaces of which the two cupola-like moulded bodies are secured. This rim can be designed as a rubber seal if the hollow space provided is to be filled with water in order to create an aquarium, or consist of a glass-clear material such that a body, i.e. a toilet lid, consisting of a glass-clear material is provided.

Brief description of the drawings

Now, embodiments of the invention will be explained in more detail by means of the attached drawings in which:

Fig. 1 shows a schematic view of a toilet comprising a toilet bowl and a toilet lid which is closed and on the outer wall surface of which a cupola-like moulded body defining an enclosed interior space is arranged;

Fig. 2 shows a vertical section of the toilet lid along the line A-A in Fig. 1, wherein a box-shaped moulded body is arranged on the outer wall surface of the toilet lid and pivotably mounted on the toilet lid in its rear area by means of a hinge;

Fig. 3 shows a vertical section of the toilet lid along the line A-A in Fig. 1, wherein a moulded body having the form of a rounded cap is arranged on the outer wall surface of the toilet lid;

Fig. 4 shows a vertical section of the toilet lid along the line A-A in Fig. 1, wherein a cupola-like moulded body whose base has an area smaller than the outer wall surface of the toilet lid is arranged on the outer wall surface of the toilet lid;

Fig. 5 shows a vertical section of the toilet lid along the line A-A in Fig. 1, wherein a cupola-like moulded body being closed at its bottom side by means of a bottom plate is arranged on the outer wall surface of the toilet lid, as well as an enlarged partial view A;

Fig. 6 shows a vertical section of the toilet lid along the line A-A in Fig. 1, wherein a cupola-like moulded body is retained on the outer wall surface of the toilet lid by means of a fixing lath, as well as an enlarged partial view B;

Fig. 7 shows a vertical section of the toilet lid along the line A-A in Fig. 1, wherein a cupola-like moulded body being sealed towards the outer wall surface of the toilet lid is arranged on the outer wall surface of the toilet lid, as well as an enlarged partial view C;

Fig. 8 shows a vertical section of a toilet lid having a central drilled through-hole both openings of which are covered by means of cupola-like moulded bodies;

Fig. 9 shows a vertical section of a toilet lid having a drilled through-hole with a large cross-sectional area, wherein both openings of the drilled through-hole are covered by means of cupola-like moulded bodies;

Fig. 10 shows a vertical section of a toilet lid having a drilled through-hole sized such that a circumferential rim of the toilet lid's material remains, wherein both openings of the toilet lid are covered by means of cupola-like moulded bodies;

Fig. 11 shows a vertical section of a toilet lid comprising a circumferential rim designed as a rubber seal to which cupola-like moulded bodies are secured on both sides;

Fig. 12 shows a vertical section of a toilet lid comprising a circumferential rim made of a glass-clear material to which cupola-like moulded bodies are secured on both sides; and

Fig. 13 shows a vertical section of a toilet lid comprising a circumferential rim made of a glass-clear material and having a T-shaped cross-sectional profile on both sides of which plate-shaped moulded bodies are arranged which are parallel to each other and spaced from one another.

Description of the preferred embodiments

According to Fig. 1, a toilet 10 consists of a toilet bowl 11 with a toilet seat not shown in the figure and a toilet lid 12 which is mounted in the rear area 11a of the toilet bowl 11 by means of hinges 13.

At least one cupola- or dome-like moulded body 20 which is made of a glass-clear or transparent plastic or another suitable material and can have any desired shape is arranged on the outer wall surface 12a of the toilet lid 12. The moulded body 20 can be box-shaped (Figs. 1 and 2), but it can also have a curved shape, e.g. be formed like a rounded cap (Fig. 3). The moulded body 20 and the outer wall surface 12a of the toilet lid 12 define an interior space 21 intended to receive decorative materials, decorative objects or functional objects 50 (Fig. 3).

The area G of the base of the cupola-like moulded body 20 corresponds to the area or part of the area of the outer wall surface 12a of the toilet lid 12 (Figs. 3 and 4). In addition, the area G covered by the base of the cupola-like moulded body 20 has a square, circular, triangular or other geometric shape or a shape corresponding to that of the outer wall surface 12a of the toilet lid 12.

The moulded body 20 comprises a circumferential supporting edge 25 which is bent perpendicularly outwards and serves to secure the cupola-like moulded body 20 to the outer wall surface 12a of the toilet lid 12 by means of screwed or glued joints 40 (Figs. 1 to 7). Other fastening members can also be provided, e.g. clamping or snap-on devices or push-fit devices.

The cupola-like moulded body 20 is open at its bottom side. Once the moulded body has been mounted, it is closed by the outer wall surface of the toilet lid 12. According to Fig. 5, the cupola-like moulded body 20 can

be closed by means of a bottom plate 23 at its bottom side, which bottom plate is fixedly or detachably attached to the moulded body 20 and serves to secure the moulded body to the outer wall surface 12a of the toilet lid 12. The bottom plate 23 can also be attached to the moulded body 20 by means of a hinge in order to enable the moulded body to be opened.

In order that the materials or objects arranged in the interior space 21 of the cupola-like moulded body 20 can be exchanged for other such materials or objects, an embodiment according to Fig. 1 envisages that the cupola-like moulded body 20 be pivotably mounted on the toilet lid 12 by means of a hinge 24 which is preferably provided in the rear area of the toilet lid 12, while the front area of the moulded body 20 is retained on the toilet lid 12 by means of a Velcro fastener, magnetic lock, clamping or snap-on device not shown in the drawing. Detachable fastening members can also be provided instead of a hinge.

According to another embodiment in which the moulded body 20 is pivotably mounted on the toilet lid 12 or the bottom plate 23, it is possible that the moulded body 20 be designed to open automatically, e.g. due to the force exerted by a spring, in addition to the manual opening thereof, i.e. the front part of the moulded body opens automatically, e.g. due to the action of a helical spring or other suitable spring members, once it has been unlocked.

Fig. 6 shows the cupola-like moulded body 20 in an inserted position. According to this embodiment, the cupola-like moulded body 20 is secured to the outer wall surface 12a of the toilet lid 12 by means of a fixing lath 30 having a Z-shaped cross-sectional profile 31, which fixing lath is secured to the toilet lid 12 and overlays the edge area 25 of the cupola-like moulded body 20 with one of its legs 31a. The gap 33 between the upper angled leg 31a and the outer wall surface 12a of the toilet lid 12 thus forms

an opening into which the angled edge portion 25 of the cupola-like moulded body 20 is inserted.

In order to achieve a watertight fit between the circumferential edge of the cupola-like moulded body 20 and the outer wall surface 12a of the toilet lid 12, the contact area of the moulded body 20 or its circumferential or partly circumferential edge portion 25 is provided with a rubber seal 60 on the side thereof facing the toilet lid 12, which rubber seal can e.g. be retained in a groove 61 provided in the edge portion 25.

The surface of the cupola-like moulded body 20 or the cupola-like moulded body as a whole can be figure-shaped.

The cupola-like moulded body 20 or portions thereof consist(s) of a resilient material which at the same time has a high inherent stiffness such that functional objects arranged in the interior space 21 of the moulded body 20 can be operated by depressing the moulded body's material in the area of control buttons of the functional object.

In the embodiments shown in Figs. 8 to 12, the toilet lid 12 is provided with a drilled through-hole 150 both openings of which 150a, 150b are covered by means of cupola-like moulded bodies 120, 120' consisting of a glass-clear material or a non-transparent material. The cupola-like moulded bodies 120, 120' extend only across the area of the drilled through-hole 150 or across the whole area of the toilet lid and are secured to the outer wall surfaces of the toilet lid 12 (Figs. 8 and 9). In these embodiments, the moulded bodies 120, 120' have a cupola- or dome-like, one- or multidimensional shape as well. The moulded bodies 120, 120' are fixedly or detachably attached to the toilet lid 12. Solid, liquid or movable decorative objects or materials and/or functional objects 50 are arranged in the hollow or interior space 21 defined by the moulded bodies 120, 120'.

The cross-sectional area of the drilled through-hole 150 in the toilet lid 12 is smaller than the area of the toilet lid 12 (Fig. 8), but the cross-sectional area of the drilled through-hole 150 in the toilet lid 12 can also be approximately the same as the area of the toilet lid 12 (Fig. 9).

The cross-sectional shape of the drilled through-hole 150 in the toilet lid 12 can also correspond to the shape of the outer wall surface of the toilet lid 12.

According to another embodiment shown in Fig. 10, the drilled through-hole 150 in the toilet lid 12 is sized such that only a circumferential rim 55 of the toilet lid 12 remains to the outer wall surfaces of which the two cupola-like moulded bodies 120, 120' are secured. According to Fig. 11, the rim 55 can be designed as a rubber seal 60.

According to Fig. 12, a toilet lid 12, particularly one consisting of a glass-clear material, is obtained if the rim 55 consists of a glass-clear material and the two cupola-like moulded bodies 120, 120' are secured to the rim 55 in a liquid-proof manner, wherein both moulded bodies 120, 120' or only the lower moulded body 120' can also be plate-shaped (Fig. 12).

In the embodiment in which the upper moulded body 120 is cupola-like and the lower moulded body 120' is designed as a lower end plate 121, the two parts 120 and 121 defining the hollow space 21 can be joined together in their circumferential edge area (Fig. 12).

In the embodiment according to Fig. 13, the circumferential rim 55 has a T-shaped cross-sectional profile 56, and the two outer surfaces 57, 57' of the leg 56a of the T-shaped cross-sectional profile 56 extending in the plane of the toilet lid 12 serve as supporting surfaces for two plate-shaped moulded bodies 121, 121' which are parallel to each other and spaced from one another and are made of a glass-clear or non-transparent

material. In this embodiment, the distance between the two plate-shaped moulded bodies 121, 121' and the size of the hollow space 21 between the two moulded bodies 121, 121' is determined by the thickness of the leg 56a of the T-shaped cross-sectional profile 56.